REMARKS

Status of the Claims

Claims 1-59 are pending. Pursuant to a restriction requirement, claims 43, 44 and 53-58 have been withdrawn from consideration. Examined claims 1-42, 45-52 and 58-59 were variously rejected under 35 U.S.C. §§ 102, 103 and 112, second paragraph.

Applicants note that claims 19-22, 24-46 and 59 were not rejected under §§ 102 or 103 and are therefore considered free of the cited art.

Claim 1 has been amended herein solely to clarify that the internal polynucleotide sequence is capable of being expressed in gram-positive bacteria. *See, e.g.,* original claim 1 and page 2, lines 25-28 of the specification. Thus, claims 1-59 are pending as shown above.

Election/Restriction

Applicants' traversal of the previous restriction requirement has been deemed unpersuasive and the restriction requirement has been made FINAL. In this regard, the Office Action states, in part:

> The traversal .... is not found persuasive because of the following reasons: (a) a search of the prior art would no necessarily yield art on all groups, and this is implicit in the fact that a search of the groups would only likely (and not definitely) find art on all of the groups, therefore the searches must be commensurate in scope in order to not be burdensome... (Office Action, page 2).

Applicants traverse the finality of this requirement, noting that they did indeed state that a "search of the art directed to the claims of any Group would necessarily turn up overlapping art if such art existed." (Response to Restriction Requirement, page 2, below indented quotation from M.P.E.P.). Accordingly, Applicants again submit that the six-way Restriction Requirement should be withdrawn and claims 1-59 should be examined together.

Information Disclosure Statement

Applicants acknowledge with appreciation receipt of initiated 1449 forms from the IDS received by the PTO on October 16, 2001; February 14, 2002; and February 26, 2002. Applicants understand that FR 2,693,475 was not considered because it is in French and that reference AE-2 of the February 26, 2002 IDS was not considered because it was duplicative of reference AD-2 in the IDS received February 21, 2002.

Specification

The specification was objected to for containing embedded hyperlinks. (Office Action, page 3). As shown above, Applicants have removed the hyperlinks by amendment.

Claim Objections

Claim 46 was objected to as depending from a withdrawn claim and correction of the dependency was required. For the reasons noted above, Applicants submit that the claims should all be examined in a single group and, accordingly, amendment should not be required.

35 U.S.C. § 112, Second Paragraph

Claims 1-42, 45-52, 58 and 59 were rejected as allegedly indefinite. (Office Action, page 4). Specifically, claims 1 and 21 (and claims depending therefrom) were alleged to be indefinite in their recital the term "derived from a transposon." *Id.* It is maintained that it is unclear "what steps constitute the derivation of the transposon sequence or how much derivation (i.e. mutation of the sequence is required for the transposon to be considered 'derived.'" *Id.*

Because the term "derived from a transposon" is not indefinite, Applicants traverse the rejection.

It is axiomatic that definiteness of claim language must be analyzed, not in a vacuum, but in light of (1) the content of the particular disclosure at issue, (2) the teachings of the art, and (3) the interpretation that would be given by one possessing an ordinary level of skill in the pertinent art the time the invention was made. *See, e.g., In re Marosi,* 218 USPQ 289 (Fed. Cir. 1983). Consequently, a claim that is understandable to one of skill in the art meets the requirements of the second paragraph of 35 U.S.C. § 112.

Applicants submit that the term "derived from a transposon" as used in the claims clearly refers to a sequence that is obtained from a naturally occurring transposon. Thus, the term is used in a conventional sense that would be readily understood by the skilled artisan and consistently used throughout the specification as filed. *See, e.g.,* Webster's . In other words, the specification, in light of the state of the art, plainly defines what is meant by "derived from a transposon." Furthermore, the fact that the term "derived from" would be understood to mean "obtained from" by the skilled artisan is plain, for example as demonstrated by the fact that there are over 345 issued patents containing the terms "derived from" and "polynucleotide" in the claims and 40 patents containing the terms "derived from" and "transposon." *See,* attached Exhibit A.

Thus, although the foregoing amendment to claim 1 has obviated the rejection of this claim, Applicants submit that both previous claims 1 and pending claim 21 reasonably apprise

those skilled in the art as to the metes and bounds of the claimed subject matter and are more than sufficiently precise. Accordingly, withdrawal of this rejection is respectfully requested.

35 U.S.C. § 102(b)

Claims 1-3, 13, 23 and 47-49 were rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Knudtson et al. (1993) *Gene* 137:217-222 (hereinafter "Knudtson"). In support of this rejection the Examiner states:

> Knudtson teaches the construction of a transposon cassette derived form the TN4001 transposon, where the transposon contains a promoterless *lacZ* reporter/marker gene (see for example the Abstract and Figure 1), as well as a vector comprising the transposon cassette, a bacterial origin of replication and the ampicillin resistance gene (see for example Figures 2 and 3). Importantly, the TN4001 transposon was originally isolated from the Gram-positive bacteria *Staphylococcus aureus* and was known to contain the gentamycin antibiotic resistance gene and imperfect internal repeate sequences within the IS256 arm of the transposon (see for example page 217-218, the bridging paragraph and Figures 2 and 3). Knudtson teaches the use of the transposon cassette for the identification of promoter sequences in the Gram-positive bacteria *Mycobacterium.* Specifically, the transposon cassette is transformed into a host cell where it integrates into the genome, thereby modifying the cell, and expression of the marker/reporter gene is mediated by a promoter sequence contained within the host genome (see for example the Abstract and pages 221-222). In order for the assay to be function, the transposon cassette must necessarily encode a transposase under the regulation of a promoter sequence that is active in the targeted host cell (otherwise, there would be no integration of the transposon into the host genome). (Office Action, page 5).

Because Knudtson does not teach or suggest the elements of the pending claims, Applicants traverse.

In particular, Knudtson does not teach or suggest cassettes that can be expressed in gram-positive bacteria, as claimed by Applicants. Pending claims 1-3, 13, 23 and 47-49 are drawn to transposon cassettes comprising an internal polynucleotide sequence expressed in gram-positive bacteria. In contrast, Knudtson teaches cassettes in which lacZ (the equivalent to the claimed internal polynucleotide sequence) is expressed in mycoplasma. Mycoplasma and mycobacteria are completely different organisms. Whereas mycoplasma are primitive gram-negative aerobic bacteria that lack a cell wall, mycobacteria are walled, gram-positive organisms. *See, e.g.,* Exhibit B, attached hereto. Thus, the Office Action errs in asserting that the Knudtson, which is clearly and unambiguously limited to use of transposon cassettes in gram-negative mycoplasma

species, describes or suggests transposon cassettes that function in gram-positive species, as set forth in all the pending claims.

Simply put, Knudtson does not describe or demonstrate transposon cassettes that are functional in gram-positive bacteria, as specifically set forth in Applicants' claims. Accordingly, this reference cannot anticipate the pending claims and withdrawal of this rejection is respectfully requested.

35 U.S.C. § 103

Claims 4-12, 14-18, 50-52 and 58 were rejected under 35 U.S.C. § 103 as allegedly obvious over Knudtson in combination with one or more secondary references. In particular, claims 4, 5, 14, 15, 50-52 and 58 were rejected as allegedly obvious over Knudtson in view of U.S. Patent No. 6,100,661 (hereinafter "Lajoie"). Claims 6-10 and 16 were rejected as allegedly obvious over Knudtson in view of Lajoie and in further view of Jacobs et al. (1991) *Mol. Gen. Genet* 230:251-256 (hereinafter "Jacobs"). Claims 11 and 12 were rejected as allegedly unpatentable over Knudtson in view of Lajoie in further view of Jacobs and in further view of Baldwin et al. (1990) *Biochem.* 29:5509-5515 (hereinafter "Baldwin"). Claims 17, 18 and 58 were rejected as allegedly unpatentable over Knudtson in view of Lajoie in further view of Jacobs and in further view of U.S. Patent No. 5,591,601 (hereinafter "Wagner").

Knudtson is cited as above. Lajoie is cited for allegedly teaching the construction of transposon cassettes containing a promoterless luciferase encoding gene "used in effectively the same manner as Knudtson." (Office Action, page 6). It is alleged that it would have been obvious to substitute luciferase for lacZ in Knudtson's cassettes. *Id.* Jacobs is cited for teaching the use of a ribosome binding sequence from gram-positive bacteria in front of the marker gene. (Office Action, page 7). Baldwin is cited for teaching identification of a yellow fluorescent protein. (Office Action, page 8). Finally, Wagner is cited for disclosing kanamycin resistance gene. (Office Action, page 10).

For the reasons noted above, Knudtson fails to describe or suggest transposon cassettes capable of expressing a polypeptide in gram-positive organisms. Rather, Knudtson relates entirely to cassettes for use in gram-negative mycoplasma.

The secondary references fail to supply what is missing from Knudtson. Lajoie is also completely silent as to gram-positive bacteria and, indeed, the only bioreporter bacteria described in this reference is the gram-negative cocci belonging to the genus *Pseudomonas*. *See, e.g.,* col. 15, lines 15-23 of Lajoie. Similarly, Wagner and Baldwin do not teach or suggest expression of sequences contained on transposon cassettes in gram-positive bacteria. Jacobs, the only reference that mentions gram-positive bacteria, fails to provide any description of transposon

cassettes comprising promoterless internal nucleotide sequences. Simply put, there is no combination of Knudtson and any of the secondary references that renders the pending claims obvious. Accordingly, Applicants respectfully request that the rejections be withdrawn.

CONCLUSION

Applicants believe that the claimed subject matter is now in condition for allowance and early notification to that effect is respectfully requested. If any issues remain to be addressed, the Examiner is encouraged to telephone the undersigned.

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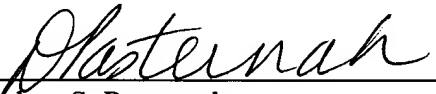
By: 

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